# SAFETY DATA SHEET



Pro ColorFlex Ink Corporation 3588 Arden Road Hayward, CA 94545 Tel: 510-293-3033 Fax: 510-293-3038

#### PRODUCT HMIS RATINGS Health.....1 (Slight) Flammability.....1 (Slight) Reactivity.....0 (Minimal)

#### **SECTION 1 – IDENTIFICATION**

Product ID No. Varies with color

Trade Name: Pro Stamp Dye Fluorescent Ink Product Class: Arts & Crafts Ink Manufacturer: Pro ColorFlex Ink Corp. 3588 Arden Road Hayward, CA 94545 Tel: (510) 293-3033 Emergency Ph. # (510) 293-3033 M – F 8:00AM – 4:30PM

# **SECTION 2 – HAZARD(S) IDENTIFICATION**



WARNING! CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED.

Exposure routes

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin contact

May cause mild skin irritation. Symptoms may include redness and burning of skin. Skin absorption of this material (or a component) may be increased through injured skin

Ingestion

Swallowing this material may be harmful.

Inhalation

Breathing of vapor or mist is possible. It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material's components: lung (for example, asthma-like conditions), Liver, Kidney, Central nervous system Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), pain in the abdomen and lower back, lung edema (fluid buildup in the lung tissue), acute kidney failure (sudden slowing or stopping of urine production)

Target Organs

Overexposure to this material's components has been suggested as a cause of the following effects in humans:, liver damage, kidney damage. Overexposure to this material's components has been suggested as a cause of the following

effects in laboratory animals:, kidney damage, liver damage, central nervous system damage. Carcinogenicity

Contains less than 0.03% formaldehyde a known cancer hazard. May outgas to levels above OSHA's action level with possible respiratory sensitization.

This material's components have been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

### **SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

COMPONENT:	CAS NO:	Conc. Range %:
Triethylene Glycol		
Monobutyl Ether	143-22-6	25 - 35
Triethylene Glycol	112-27-6	25 - 35
Diethylene Glycol	111-46-6	1 – 5
Diethylene Glycol		
Monobutyl Ether	112-34-5	1 – 5
Ethylene Glycol		
Monobutyl Ether	111-76-2	<1.0
Ethylene Glycol	107-21-1	<1.0

### **SECTION 4 - EMERGENCY FIRST AID PROCEDURES:**

General Information

Consult a physician. Show this safety data sheet to the doctor in attendance.

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention. Notes to physician

Hazards: Ingestion or other significant exposure to this material (or a component) may cause metabolic acidosis. Treatment: Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol, diethylene glycol and methanol poisoning.

# **SECTION 5 – FIREFIGHTING MEASURES**

FLASH POINT: 350 °F

FLAMMABLE LIMITS: N/A

Suitable extinguishing media:

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function but will be less effective. Special hazards arising from the substance or mixture:

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Advice for firefighters:

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fireexposed containers and fire-affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

Special Protective Equipment for Firefighters: Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

### **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

#### STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK:

SMALL SPILL: Small spills may be collected with absorbent material for disposal. Wash area with soap and water. LARGE SPILL: Contain spill immediately. Prevent from getting into public sewer, water system or surface waters. Place in suitable container for disposal.

WASTE DISPOSAL INFORMATION: Dispose in accordance with Local, State and Federal regulations.

### **SECTION 7 - STORAGE AND HANDLING**

Handling:

General Handling: Avoid contact with eyes, skin, and clothing. Do not swallow. Wash thoroughly after handling.

Storage:

Do not store near food, foodstuffs, drugs or portable water supplies. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

#### **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

Diethylene Glycol Monobutyl Ether 112-34-5 Dow IHG TWA 35ppm Diethylene Glycol 111-46-6 WEEL 8-hr TWA 10 mg/m3Ethylene Glycol Monobutyl Ether 111-76-2 ACGIH 8-hour, time-weighted average 20 ppm NIOSH Time-weighted average concentration for up to a 10-hour workday during a 40- hour workweek 5 ppm NIOSH

Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek 24 mg/m3 **OSHA** 8-hour time weighted average 50 ppm **OSHA** 8-hour time weighted average 240 mg/m3 **OSHA** 8-hour time weighted average 25 ppm OSHA 8-hour time weighted average 120 mg/m3 Ethylene Glycol 107-21-1 OSHA Ceiling Limit Value 50 ppm **OSHA** Ceiling Limit Value 125 mg/m3 ACGIH Ceiling Limit Value 100 mg/m3

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

VENTILATION: Provide sufficient mechanical ventilation. PROTECTIVE GLOVES: Wear resistant gloves, such as natural rubber. EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advisable. RESPIRATORY PROTECTION: Respiratory protection is not normally required. If use creates mists, then a NIOSH approved respiratory with a dust and mist cartridge is recommended. OTHER PROTECTIVE EQUIPMENT: An eye wash station should be available in the work area.

### **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE: Colored Liquid PHYSICAL STATE: Liquid EVAPORATION RATE (vs butyl acetate): Slower % VOLATILE BY WEIGHT: N/A BOILING RANGE: 244 - 245 °F Literature ODOR: Mild Glycol VAPOR DENSITY (vs Air): Heavier SOLUBILITY IN WATER: Partial

### **SECTION 10 - REACTIVITY AND STABILITY DATA**

Reactivity:

No dangerous reaction known under conditions of normal use. Chemical stability:

Thermally stable at recommended temperatures and pressures.

Possibility of hazardous reactions: Polymerization will not occur. Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Incompatible Materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers. Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials.

# SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity: Component: (Triethylene Glycol Monobutyl Ether) Literature Ingestion LD50, rat 5,170 mg/kg Dermal LD50, rabbit 3,540 mg/kg Inhalation As product: The LC50 has not been determined. Eye damage/eye irritation May cause severe eye irritation. May cause moderate corneal injury. Skin corrosion/irritation Brief contact may cause skin irritation with local redness. May cause more severe response if skin is abraded (scratched or cut). Sensitization Skin No relevant data found. Respiratory No relevant data found. Repeated Dose Toxicity Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects. Repeated exposure did not produce systemic toxicity when applied to the skin of rabbits. Chronic Toxicity and Carcinogenicity No relevant data found. **Developmental Toxicity** Did not cause birth defects or any other fetal effects in laboratory animals. **Reproductive Toxicity** For similar material(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Genetic Toxicology In vitro genetic toxicity studies were negative. Acute Toxicity: Component: (Triethylene Gycol) Literature Ingestion LD50: 17,000 mg/kg Species: rat Inhalation: 5.14 mg/l Exposure time: 30 min Species: mouse Symptoms: periocular wetness and ocular opacities Dermal: LD50: 22,500 mg/kg Species: rabbit

Acute Toxicity: Component: (Diethylene Glycol) Literature Ingestion

LD50, Rat, male 19,600 mg/kg Estimated. Lethal Dose, Human, adult 2 Ounces LD50, Rat 12,565 mg/kg Dermal LD50, Rabbit 13,330 mg/kg Inhalation LC50, 4 h, Aerosol, Rat > 4.6 mg/l LC50, 4 h, Rat > 4.4 mg/l Eye damage/eye irritation May cause slight temporary eye irritation. Corneal injury is unlikely. Skin corrosion/irritation Prolonged contact is essentially nonirritating to skin. Sensitization: Skin: Did not cause allergic skin reactions when tested in humans. Did not cause allergic skin reactions when tested in guinea pigs. **Respiratory:** No relevant data found. Repeated Dose Toxicity: In humans, effects have been reported on the following organs: Kidney. Gastrointestinal tract. In humans, symptoms may include: Headache. Nausea and/or vomiting. Abdominal discomfort. In animals, effects have been reported on the following organs: Liver. Chronic Toxicity and Carcinogenicity: Diethylene glycol has been tested for carcinogenicity in animal studies and is not believed to pose a carcinogenic risk to man. Developmental Toxicity: Diethylene glycol has caused toxicity to the fetus and some birth defects at maternally toxic, high doses in animals. Other animal studies have not reproduced birth defects even at much higher doses that caused severe maternal toxicity. Reproductive Toxicity: Diethylene glycol did not interfere with reproduction in animal studies except at very high doses. Genetic Toxicology: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative. Acute Toxicity: Product: (Diethylene Glycol Monobutyl Ether) Literature Ingestion: LD50: 5,660 mg/kg Species: rat Inhalation: No data available Dermal: LD50: 2,700 mg/kg Species: rabbit Symptoms: Dermatitis Acute Toxicity: Product (Ethylene Glycol Monobutyl Ether) Literature Dermal LC50: 450 ppm Exposure time: 4 h Species: rat Symptoms: ataxia, weight loss Acute Toxicity: Component: (Ethylene Glycol) Literature Inhalation:

> 2.5 mg/l Exposure time: 6 h Species: rat Dermal:
LD50: 10,626 mg/kg Species: rabbit

# **SECTION 12 – ECOLOGICAL INFORMATION**

Toxicity: Component: (Triethylene Glycol Monobutyl Ether) Literature Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). Fish Acute & Prolonged Toxicity LC50, Leuciscus idus (Golden orfe), static test, 96 h: 2,200 - 4,600 mg/l Aquatic Invertebrate Acute Toxicity EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 500 mg/l Aquatic Plant Toxicity EC50, Desmodesmus subspicatus (green algae), static test, Growth rate inhibition, 72 h: 62.5 mg/l Toxicity to Micro-organisms IC50; Bacteria, static test, 16 h: > 5,000 mg/l Persistence and Degradability Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability). **OECD Biodegradation Tests:** Exposure Time Biodegradation Method 10 Day Window 85% Fail 28d OECD 301D Test Theoretical Oxygen Demand: 2.10 mg/mg Bioaccumulative potential Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Partition coefficient, n-octanol/water (log Pow): 0.51 Measured Mobility in soil Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50). Partition coefficient, soil organic carbon/water (Koc): 10 Estimated. Henry's Law Constant (H): 6.79E-10 atm\*m3/mole; 25 °C Estimated. Toxicity Component: (Triethylene Glycol) Literature Biodegradability Readily biodegradable. Bioaccumulation Species: Fish Bioconcentration factor (BCF): 10.0 Remarks: Does not bioaccumulate. Toxicity to Fish LC50: 100 mg/l Exposure time: 96 h Toxicity to daphnia and other aquatic invertebrates 46,500 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Toxicity to bacteria 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Test Type: Respiration inhibition Chemical Oxygen Demand (COD) 1,590 mg/g Toxicity: Component: (Diethylene Glycol) Literature Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). Fish Acute & Prolonged Toxicity: LC50, fathead minnow (Pimephales promelas), flow-through, 96 h: 75,200 mg/l Aquatic Invertebrate Acute Toxicity: EC50, water flea Daphnia magna, 48 h, immobilization: 48,900 mg/l Aquatic Plant Toxicity:

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), biomass growth

inhibition, 96 h: > 100 mg/lToxicity to Micro-organisms: EC50, OECD 209 Test; activated sludge, 3 h: > 1,000 mg/l Persistence and Degradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability). OECD Biodegradation Tests: Based on analogy. 10 Day Window Biodegradation **Exposure** Time Method 90 - 100 % 20 d OECD 301A Test pass 82 - 98 % 28 d OECD 302C Test Not applicable Indirect Photodegradation with OH Radicals Rate Constant Atmospheric Half-life Method 2.23E-11 cm3/s 5.7 h Estimated. Theoretical Oxygen Demand: 1.51 mg/mg Bioaccumulative potential: Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Partition coefficient, n-octanol/water (log Pow): -1.98 Estimated. Bioconcentration Factor (BCF): 100; fish; Measured Mobility in soil: Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high (Koc between 0 and 50). Partition coefficient, soil organic carbon/water (Koc): <1 Estimated. Henry's Law Constant (H): 7.96E-10 atm\*m3/mole; 25 °C Estimated. Distribution in Environment: Mackay Level 1 Fugacity Model: Air Biota Soil Sediment Water. 0.75 % 99.25 % 0 % 0 % 0% Toxicity: Component (Diethylene Glycol Monobutyl Ether) Literature Biodegradability Result: Readily biodegradable. 100 % Method: OECD Test Guideline 302B Toxicity to fish: LC50: 1,300 mg/l Exposure time: 96 h Species: Lepomis macrochirus (Bluegill sunfish) Test Type: static test Toxicity to Daphnia: EC50: 100 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Test Type: Immobilization Toxicity to Algae: EC50: 100 mg/l Exposure time: 96 h Species: Scenedesmus capricornutum (fresh water algae) Method: Static Test Type: Growth inhibition Toxicity to Bacteria: EC 50: 255 mg/l Species: Bacteria

Test Type: Static

Toxicity: Component (Ethylene Glycol Monobutyl Ether) Toxicity to fish: LC50: 220 mg/l Exposure time: 96 h Species: Fish Toxicity to Dapnia: EC50: 1,815 mg/l Exposure time: 24 h Species: Daphnia magna (Water flea) Toxicity to Algae: EC50: 911 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) Analytical monitoring: yes Toxicity: Component: (Ethylene Glycol) Literature Biodegradability: aerobic 90 - 100 % Remarks: Readily biodegradable Bioaccumulation:

Exposure time: 61 d Bioconcentration factor (BCF): 0.60

Exposure time: 48 h 11 / 14

Species: Oncorhynchus mykiss (rainbow trout) Toxicity to Daphnia and other aquatic invertebrate:

Species: Daphnia magna (Water flea)

Toxicity to Fish: LC50: 18,500 mg/l Exposure time: 96 h

LC50: 41.000 mg/l

# SECTION 13 – DISPOSAL CONSIDERATIONS

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HEREIN PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information.

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

# **SECTION 14 – TRANSPORTATION INFORMATION**

DOT Non-Bulk NOT REGULATED

DOT Bulk NOT REGULATED

#### ICAO/IATA NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

#### **SECTION 15 – REGULATORY INFORMATION**

OSHA Hazard Communication Standard:

This product contains a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 Immediate (Acute) Health Hazard Yes Delayed (Chronic) Health Hazard Yes Fire Hazard No Reactive Hazard No Sudden Release of Pressure Hazard No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following chemicals subject to the reporting of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

Ingredient Name	CAS #	Percentage
C.I. BASIC VIOLET 11:1, TETRACHLOROZINCATE	73398-89-7	0 - 2%
C.I. BASIC RED 1	00989-38-8	0 - 2%

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Diethylene glycol	111-46-6	< 15.0 %
Propylene Glycol	57-55-6	<10.0 %
Diethylene Glycol		
Monobutyl Ether	112-34-5	<1.0%

Pennsylvania (Worker and Community Right-To-Know Act):Pennsylvania Special Hazardous Substances List:ComponentCAS #AmountTriethylene Glycol112-27-6<35%</td>

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute. However, it contains less than 0.03% formaldehyde a known cancer hazard. US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

Hazardous Products Act Information: Hazardous Ingredients

This product contains the following ingredients which are Controlled Products and/or are on the Ingredient Disclosure List (Canadian HPA Section 13 and 14).

Component	CAS #	Amount
Triethylene glycol monobutyl ether	143-22-6	25.0 - 35.0 %
Diethylene glycol monobutyl ether	112-34-5	1.0 - 2.0 %
Triethylene glycol	112-27-6	25.0 - 35%

# **SECTION 16 – OTHER INFORMATION**

#### Hazard Rating System

NFPA	Health	Fire	Reactivity
	1	1	0

Date of Preparation: 06/03/2014 Revised: First Edition

Disclaimer:

This Material Safety Data Sheet is provided without charge to customers of Pro ColorFlex Ink Corporation. Data is the most current know to Pro ColorFlex Ink Corporation at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. All information appearing herein is based upon data obtained from the manufacturer and or recognized technical sources. While the information is believed to be accurate, Pro ColorFlex Ink Corporation makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Pro ColorFlex Ink Corporation's control and therefore users are responsible to verify this data under their own operating conditions to determine if the product is suitable for their particular purposes, and they assume all risks of their use, handling and disposal of the product.

The information contained in this MSDS relates only to the product designated herein and does not relate to its use in combination with any other material or in any other process.